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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,598	02/16/2001	Thomas Thaler	700-212RP	4386
22191	7590	07/10/2006		
GREENBERG-TRAURIG 1750 TYSONS BOULEVARD, 12TH FLOOR MCLEAN, VA 22102			EXAMINER FERRIS, DERRICK W	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/785,598

Applicant(s)

THALER ET AL.

Examiner

Derrick W. Ferris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/30/2006 has been entered.

Response to Amendment

2. **Claims 1-24** as amended are still in consideration for this application.

3. Examiner does **not withdraw** the corresponding obviousness rejection(s) to *Frouin* in view of *Hulyalkar*. In particular, no arguments were filed with the request for continuation with respect to the rejections such that all previous rejections are maintained. Examiner also notes the last set of claims was filed 12/28/2005. In addition, applicant's previous arguments, filed 12/28/2005 (starting at page 9), were already addressed by the examiner in the Advisory Action mailed 1/11/2006. As such, the current Office action is made non-final even though no claim amendments and arguments were made since applicant paid for an RCE. However, in the interest of advancing prosecution, please also note the new rejection below with a different publication date.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. **Claims 1, 2, 5-10, 13-15, 17, 18, and 20-24** are rejected under 35 U.S.C. 102(a) as being anticipated by WO 99/55028 to “*Thomson Multimedia*”.

Please note that the following rejection below references the child U.S. Patent 6,914,895 B1 to Straub et al. since the child application is printed in English. As such, please see any column, line references with respect to the U.S. Patent.

As to **claim 1**, generating a network-wide time signal using a reference time generator is taught as network wide synchronization, see e.g., column 4, lines 7-42. Distributing the network-wide signal from a first node to a first segment of the network having a plurality of nodes is taught e.g., as 1394 bus 1 in figure 1. Distributing the network-wide signal to a first bridge portal is taught e.g., as WL1 (e.g., the “cycle server”). Distributing the network-wide time signal from a second bridge portal to a second segment of the network having a plurality of nodes is taught e.g., as segment 2 or 3 and column 11, lines 1-2. Converting, at each respective node, the network wide-time signal to a local synchronization signal is taught e.g., as slaving a clock, see e.g., column 7, lines 1-30. Wherein the network-wide time signal is distributed in at least said first network segment using a network-inherent synchronization event along with a lower-order time, with a bridge synchronizing the network-inherent synchronization event between said first and second bridge portals, and wherein a high-order time is distributed to the network is taught e.g., as distributing the transmission of frequency and transmission of clock signal) separately across the network, see .g., column 7, lines 30-67.

As to **claim 2**, see e.g., column 5, lines 27-40 with respect to distance (i.e., propagation delay).

As to **claim 5**, the network-wide signal is a house synchronization signal.

As to **claim 6**, see e.g., column 6, lines 35-67 with respect to frequency.

As to **claim 7**, with respect to phase locking the signal, see e.g., column 8..

As to **claims 8-9**, using a phase lock loop is part of delay compensation, see e.g., column 8.

As to **claim 10**, see e.g., column 3, lines 60-64 with respect to supporting the IEEE 1394 standard.

As to **claim 13**, see similar rejection to claim 1.

As to **claim 14**, see similar rejection to claim 2.

As to **claim 15**, see e.g., column 4, lines 9-25 with respect to network cycle master signal.

As to **claim 17**, see similar rejection to claim 10.

As to **claim 18**, see similar rejection to claim 1.

As to **claims 20, 21 and 22**, see similar rejection to claim 10.

As to **claim 23**, see e.g., column 7, lines 30-36 with respect to bus time.

As to **claim 24**, since a phase lock look is used the signals overlap.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-10 and 13-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,778,543 B1 to *Frouin et al.* ("*Frouin*") in view of U.S. Patent No. U.S. Patent No. 6,032,261 A to *Hulyalkar*.

As such to **claim 1**, see e.g., figure 3 of *Frouin*. Here a first segment is D and a second segment is E. The network-wide time signal is generated by each CM as part of the CSP (see e.g., figure 10), see e.g., column 14, lines 12-14 (i.e., the CM on segment D is a first node and the CM on segment E is the second node). The network-wide signal is distributed in the second segment E as part of a synchronization command (see e.g., figure 11) to the slave CM where the slave CM in turn uses the signal to synchronize the nodes on its segment. As such, the first bridge port is the port connecting bridge Pde to segment D and a second bridge port is the port connecting bridge Pde to segment E.

Frouin is silent or deficient to the further limitation of converting at each respective node, the network-wide time signal to a local synchronization signal. In particular, *Frouin* teaches that each node on the segment receives the CSP packet and performs synchronization but may not be clear that the local signal is converted.

Hulyalkar teaches the further recited limitation above at e.g., column 5, lines 24-30.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Frouin* by clarifying how the synchronization is performed at the local node.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to clarifying how the registers are reset. In particular, *Hulyalkar* cures the above-cited deficiency by providing a motivation found at e.g., column 5, lines 24-30. Second, there would be a reasonable expectation of success since both references teach CSP packets. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claims 2-4**, see e.g., column 5, lines 24-30 of *Hulyalkar* which teaches resetting the cyclic counter which reduces drift of propagation delay. In addition, *Frouin* further teaches that the bridge sends a command to the slave CM so that the network timing is synchronous which reduces propagation delay since the network timing signal is then sent on that particular bus via the slave CM, see e.g., column 4, lines 46-49 with respect to delay phase as taught in the reference. For example, the readjusted network timing signal in the slave CM can cause the local node to compensate for delay by adding an extra signal delay to the local synchronization signal.

As to **claim 5**, see e.g., the `cycle_start` packet.

As to **claim 6**, see e.g., column 2, lines 51-67 where the frequency is based off a cycle clock.

As to **claim 7**, see e.g., figure 4 with respect to phase locking the local synchronization signal and column 5, lines 1-29.

As to **claim 8**, see similar rejection to claims 2-4.

As to **claim 9**, see similar rejection to claims 2-4.

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As to **claim 10**, see e.g., column 3, lines 20-54 with respect to being IEEE 1394 compliant.

As to **claim 13**, see similar rejection to claim 1.

As to **claim 14**, see similar rejection to claim 2.

As to **claim 15**, see similar rejection to claim 3.

As to **claim 16**, see similar rejection to claim 4.

As to **claim 17**, both references teach an IEEE 1394 bus, see e.g., column 10, lines 53 of *Frouin*.

As to **claim 18**, see similar rejection to claim 1. Examples of applications include e.g., TV, PC, VCRs, etc., see e.g., column 1, lines 12-30.

As to **claim 19**, see similar rejection to combined claims 2 and 3.

As to **claim 20**, see similar rejection to claim 17.

As to **claim 21**, see similar rejection to claim 1 where the CSP packet is taught in figure 10 of *Frouin*.

As to **claim 22**, see similar rejection to claim 1 where the CSP packet includes a cycle_time data is taught in figure 10 of *Frouin*.

As to **claim 23**, see figure 13 where the command is the bus time.

As to **claim 24**, the overlapping is based on setting the counters in the CP.

6. **Claims 11 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,778,543 B1 to *Frouin et al.* ("*Frouin*") in view of U.S. Patent No. 6,032,261 A to

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Hulyalkar in view of “Application Critical Parameters for Rubidium Standards” to (“*Weidemann*”).

In making a proper obviousness rejection under MPEP 706.02(j), the examiner will address the following four steps:

- a) *the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line numbers where appropriate;*
- b) *the difference of differences in the claim(s) over the applied cited references;*
- c) *the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter; and*
- d) *an explanation why one skilled in the art at the time of the invention was made would have been motivated to make the proposed modification.*

As such to **claim 11**, for step (a) *Hulyalkar* discloses limitations in the base claim.

For step (b) *Hulyalkar* is silent or deficient to the further limitation wherein the step of generating the network wide time signal includes the step of utilizing a rubidium reference signal generator. In particular, *Hulyalkar* discloses using a crystal oscillator 42, see e.g., column 4, lines 40-51 and figure 3.

Weidemann teaches the further recited limitation above at e.g., in the summary on page 87.

For step (c), the proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Hulyalkar* to clarify that an oscillator is a rubidium oscillator.

In order to establish a prima facie case of obviousness for step (d), three basic criteria must be met. The three criteria according to MPEP 706.02(j) are as follows:

First there must be some suggestion or modification, either in the reference(s) themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a

reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

As such, for step (d) examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the further limitation wherein the step of generating the network wide time signal includes the step of utilizing a rubidium reference signal generator. In particular, the motivation for modifying the reference or to combine the reference teachings would be to provide highly reliable clocking source. In particular, *Weidemann* cures the above-cited deficiency by providing a motivation found at e.g., in the summary on page 87. Second, there would be a reasonable expectation of success since using rubidium oscillators is well known in the art as a clocking source.

As to **claim 12**, examiner notes a similar rejection as claim 11 where *Weidemann* also teaches using GPS as taught in the summary on page 87 (i.e., GPS provides a long term reference for Rb clocks). In particular, one skilled in the art would be motivated to use GPS since it would be expensive to deploy a rubidium clock at every site such that each site can get their clocking from one central source via GPS.

7. **Claims 11 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/55028 to "*Thomson Multimedia*" in view of "Application Critical Parameters for Rubidium Standards" to ("*Weidemann*").

In making a proper obviousness rejection under MPEP 706.02(j), the examiner will address the following four steps:

- e) *the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line numbers where appropriate;*

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- f) the difference of differences in the claim(s) over the applied cited references;*
- g) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter; and*
- h) an explanation why one skilled in the art at the time of the invention was made would have been motivated to make the proposed modification.*

As such to **claim 11**, for step (a) *Thomson Multimedia* discloses limitations in the base claim.

For step (b) *Thomson Multimedia* is silent or deficient to the further limitation wherein the step of generating the network wide time signal includes the step of utilizing a rubidium reference signal generator. In particular, *Thomson Multimedia* discloses using a frequency but may be silent or deficient to further using a rubidium reference signal generator, see e.g., column 8, lines 5-35.

Weidemann teaches the further recited limitation above at e.g., in the summary on page 87.

For step (c), the proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Thomson Multimedia* to clarify that an oscillator is a rubidium oscillator.

In order to establish a prima facie case of obviousness for step (d), three basic criteria must be met. The three criteria according to MPEP 706.02(j) are as follows:

First there must be some suggestion or modification, either in the reference(s) themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

As such, for step (d) examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the further limitation wherein

the step of generating the network wide time signal includes the step of utilizing a rubidium reference signal generator. In particular, the motivation for modifying the reference or to combine the reference teachings would be to provide highly reliable clocking source. In particular, *Weidemann* cures the above-cited deficiency by providing a motivation found at e.g., in the summary on page 87. Second, there would be a reasonable expectation of success since using rubidium oscillators is well known in the art as a clocking source.

As to **claim 12**, examiner notes a similar rejection as claim 11 where *Weidemann* also teaches using GPS as taught in the summary on page 87 (i.e., GPS provides a long term reference for Rb clocks). In particular, one skilled in the art would be motivated to use GPS since it would be expensive to deploy a rubidium clock at every site such that each site can get their clocking from one central source via GPS.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

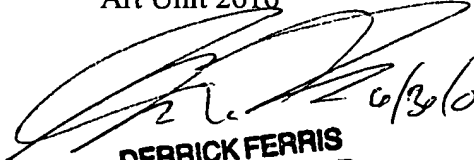
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571)272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


DWF

Derrick W. Ferris
Examiner
Art Unit 2616


6/3/04
**DERRICK FERRIS
PATENT EXAMINER**